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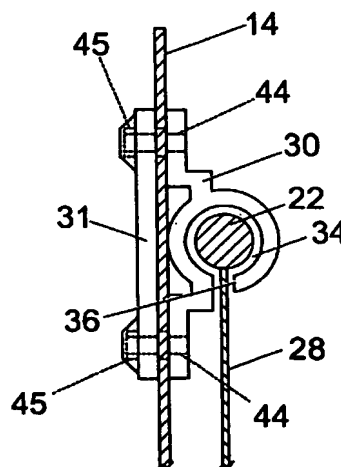
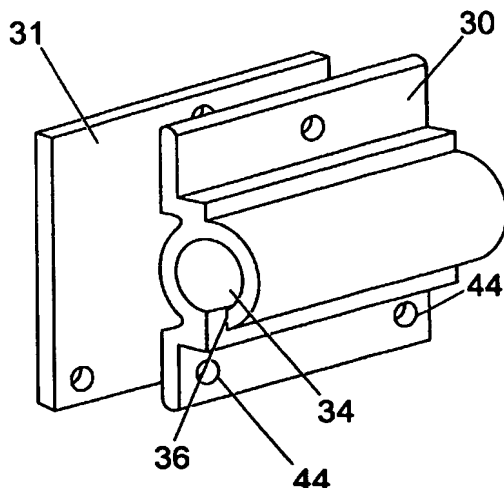
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(54) Title: METHOD AND APPARATUS FOR DISPLAYING ADVERTISEMENTS ON A VEHICLE



(57) Abstract: An advertising panel (20) which can be used to selectively attach advertisements to the side of a road vehicle (10) or to a fixed structure in a readily demountable manner comprises a sheet (22) of plastic material, the sheet having an image applied to a first side of the sheet. An elongate fastener (22) having a thickness greater than the sheet extends along a longitudinal edge of the sheet. The elongate fastener (22) engages with one or more slotted track members (30, 32) provided on a wall (16) or curtain (14) of the road vehicle. The track member and slot (36) may be provided in a continuous length (32), corresponding to the length of the longitudinal edge, or in discrete sections (30), which are particularly applicable for use with a curtain. Elongate fasteners (22) can be provided on the upper and lower edges of the panel (20), so that the panel is installed by threading it horizontally into the slots (36) of upper and lower track members (30, 32) simultaneously. The system requires minimal structural alterations to a vehicle (10) to enable it to carry advertising panels, and allows advertising panels to be changed easily.

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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

1     METHOD AND APPARATUS FOR DISPLAYING ADVERTISEMENTS  
2     ON A VEHICLE

3  
4     This invention relates to advertisements, and  
5     relates more particularly but not exclusively to a  
6     system for selectively attaching advertisements to  
7     the sides of road vehicles or fixed sites in a  
8     readily demountable manner, and to a method of  
9     adapting road vehicles for the selective display of  
10    advertisements.

11  
12    At present, static exterior advertisements are  
13    achieved using posters attached to a building  
14    surface or a panel provided on the building surface.  
15    The print medium used is typically paper which is  
16    pasted to the surface using an adhesive. Such  
17    advertisements require considerable effort to  
18    install and remove the paper medium, printing costs  
19    are relatively high and planning restrictions apply.

20  
21    Furthermore, currently there are many load-carrying  
22    road vehicles having substantially vertical sides

1     which are either plain, or carry minimal information  
2     (e.g. merely the name of a transport company).  
3     These vehicle sides are extensively exposed to the  
4     sight of the general public, not least because the  
5     majority of journeys of load-carrying road vehicles  
6     take place on public roads that are also extensively  
7     used by pedestrians and/or users of personal road  
8     transport and/or passengers in public road  
9     transport. Consequently, the sides of load-carrying  
10    road vehicles represent a facility for mobile  
11    advertising that currently tends to be used only by  
12    the vehicle owners for self-advertisement. Some use  
13    of the exteriors of road vehicles is known for  
14    advertising by organisations other than the vehicle  
15    owner, but such advertising is currently limited to  
16    public transport vehicles that carry human  
17    passengers rather than inanimate cargoes, and the  
18    advertisements are either pasted-on paper, or in the  
19    nature of bodywork painting that is substantially  
20    permanent and not changeable without time-consuming  
21    repainting of the vehicle.

22

23    US 5,845,423 and US 5,657,566 address the problem of  
24    providing advertisements on the sides of load-  
25    carrying road vehicles, but the effectiveness of  
26    their solutions is hampered by the fact that the  
27    vehicles need extensive structural modification in  
28    the form of added rails, mounting brackets and  
29    fasteners and the like, to allow the mounting and  
30    removal of advertisement panels. Moreover the  
31    advertisement panels themselves are complicated and  
32    relatively expensive. Moreover the advertisement

1 panels can be used only with rigid sided vehicles,  
2 since they do not allow simple access to the side  
3 curtains of flexible sided vehicles, which provide  
4 access to the load area by allowing the removal or  
5 rolling up of flexible side curtains attached to the  
6 frame of the vehicle.

7  
8 It is an object of the present invention to provide  
9 an alternative system and method for providing  
10 static exterior advertisements which require less  
11 effort to install or remove, reduce printing costs  
12 and avoid planning restrictions.

13  
14 It is a further object of the present invention to  
15 provide a system and a method for enabling mobile  
16 advertisements to be selectively mounted on load-  
17 carrying road vehicles in a manner which is simple  
18 to carry out and which is cost effective, allowing  
19 the use of economical advertisement panels and the  
20 requiring minimal structural alterations to a  
21 vehicle to enable it to carry advertisement panels.  
22 It is a further object of the invention to provide a  
23 system and a method for enabling mobile  
24 advertisements to be selectively mounted on both  
25 rigid sided and flexible sided road vehicles.

26  
27 As used in this specification, the term "vehicle"  
28 refers to a road vehicle possessing substantially  
29 vertical sides suitable for carrying advertisements,  
30 such sides including but not being restricted to  
31 permanently fixed sides, sides formed as one or more  
32 panels that are demountable or hinged for providing

1 access to a cargo carried by the vehicle, and  
2 curtain sides (i.e. curtains of more or less  
3 flexible sheet material whose upper edges are  
4 suspended from the vehicle, and whose lower edges  
5 are clipped or strapped to the vehicle).

6

7 As used in this specification, the term  
8 "advertisement" refers to at least one essentially  
9 two-dimensional image having an impression on a  
10 spectator that is primarily or wholly visual.

11

12 According to a first aspect of the present invention  
13 there is provided an advertising panel for mounting  
14 to a structure, the panel comprising a sheet of  
15 plastic mesh material having an image applied to a  
16 first side of the sheet, wherein the panel has an  
17 elongate fastener provided on at least one  
18 longitudinal edge, the elongate fastener having a  
19 thickness greater than the sheet and being adapted  
20 to engage with a corresponding slot provided on the  
21 structure.

22

23 Preferably, the advertising panel is mounted to the  
24 structure of a vehicle, such as a side panel of a  
25 vehicle. Alternatively, the advertising panel is  
26 mounted to a static structure, such as an  
27 advertising hoarding.

28

29 In one preferred embodiment the elongate fastener  
30 comprises a longitudinal member held within a hem of  
31 the sheet. Preferably the hem is formed by folding  
32 an edge of the sheet around the elongate fastener

1 and back against the sheet, then securing the edge  
2 to the sheet. Securing may be carried out by  
3 stitching, applying adhesive, thermal bonding, or  
4 any suitable method.

5

6 In another preferred embodiment the elongate  
7 fastener comprises a longitudinal member secured to  
8 the sheet by an edging strip. Preferably the edging  
9 strip passes around the elongate fastener and is  
10 secured to each side of the edge of the sheet.  
11 Securing may be carried out by stitching, applying  
12 adhesive, thermal bonding, or any suitable method.

13

14 The longitudinal member is preferably flexible, for  
15 example a rope, cord, rubber or plastic extrusion or  
16 similar. Preferably the panel has an elongate  
17 fastener provided on two opposite longitudinal  
18 edges.

19

20 Preferably the sheet is flexible. Preferably the  
21 sheet is of PVC, polyester or a combination thereof.  
22 Preferably the mesh is provided with apertures  
23 allowing air passage therethrough. Preferably the  
24 sheet has an air permeability of at least 1000  
25 litres per second at 100 pascal.

26

27 Preferably the sheet of the advertising panel is a  
28 woven material. Preferably the warp and weft fibres  
29 are bonded to each other at their intersections.

30

31 Preferably the panel is substantially rectangular.

32 In one embodiment the panel may be provided with an

1 extension piece at one or each of the two opposite  
2 side edges. Preferably the extension pieces are  
3 provided with securing means to allow them to be  
4 wrapped around the corner of a vehicle and secured  
5 to the vehicle. Preferably an extension piece is  
6 provided on the leading edge of the sheet, the  
7 leading edge being the edge nearest the front of the  
8 vehicle when the panel is mounted on a vehicle.  
9 Alternatively the leading edge of the sheet may be  
10 provided with a continuous fastener which extends  
11 substantially over the entire length of the leading  
12 edge. In another embodiment the panel may be  
13 provided with an elongate fastener as described  
14 above on each of the two opposite side edges, the  
15 fastener being adapted to engage with a track member  
16 on the structure.

17  
18 According to a second aspect of the present  
19 invention there is provided a vehicle, the vehicle  
20 having a wall provided with a slot or slots on the  
21 exterior surface thereof, the vehicle having an  
22 advertising panel mounted on said exterior surface,  
23 the panel comprising a sheet of plastic mesh  
24 material having an image applied to a first side of  
25 the sheet, wherein the panel has an elongate  
26 fastener provided on at least one longitudinal edge,  
27 the elongate fastener having a thickness greater  
28 than the sheet and engaged with said slot or slots  
29 on said vehicle.

30  
31 Preferably the advertising panel is a panel  
32 according to the first aspect of the present



1 invention. Preferably the exterior surface is on a  
2 side wall of the vehicle.

3  
4 Preferably the slot or slots are provided in one or  
5 more track members bonded to the side wall by  
6 adhesive. Alternatively the track members may be  
7 secured to the side wall by fixing means such as  
8 bolts, screw, rivets or similar. Preferably the  
9 track members are extruded members. Preferably the  
10 slot or slots are shaped to allow keying of the  
11 elongate fastener with the slot or slots. In one  
12 preferred embodiment track members shaped to allow  
13 keying of the elongate fastener are provided on the  
14 upper and lower edges of the exterior surface, while  
15 lateral fastening members for securing the vertical  
16 side edges of the advertising panel are provided at  
17 the vertical side edges of the exterior surface.  
18 The lateral fastening members may be push-fit track  
19 members shaped to allow reversible snap engagement  
20 of the elongate fastener. Alternatively the lateral  
21 fastening members may be releasable clamping members  
22 which permit the clamping of the elongate fastener  
23 in a plurality of positions. Alternatively the  
24 lateral fastening members may be mutually engageable  
25 fastening means provided on the side wall and the  
26 advertising panel, such as hook and loop fasteners  
27 or 3M<sup>TM</sup> Dual Lock<sup>TM</sup>.

28  
29 The track members may extend continuously over the  
30 length of the elongate fastener. Alternatively, the  
31 track members are provided as discrete track members  
32 spaced at regular intervals on the vehicle..

1 According to a third aspect of the present invention  
2 there is provided a vehicle, the vehicle having a  
3 load bearing volume at least partially enclosed by a  
4 curtain, said curtain being provided with a slot or  
5 slots on the exterior surface thereof, the vehicle  
6 having an advertising panel on said exterior  
7 surface, the panel comprising a sheet of plastic  
8 mesh material having an image applied to a first  
9 side of the sheet, wherein the panel has an elongate  
10 fastener provided on at least one longitudinal edge,  
11 the elongate fastener having a thickness greater  
12 than the sheet and engaged with said slot or slots  
13 on said vehicle.

14  
15 Preferably the advertising panel is a panel  
16 according to the first aspect of the present  
17 invention.

18  
19 Preferably the slot or slots are provided in one or  
20 more track members bonded to the curtain by  
21 adhesive. Alternatively they may be secured to the  
22 curtain by thermal bonding, ultrasonic bonding,  
23 stitching, moulding or similar. Alternatively the  
24 track members may be secured to the curtain by  
25 fixing means such as bolts, screw, rivets or  
26 similar, preferably in conjunction with a washer  
27 plate on the opposite surface of the curtain.

28 Preferably the track members are extruded members.  
29 Preferably the slot or slots are shaped to allow  
30 keying of the elongate fastener with the slot or  
31 slots. In one preferred embodiment track members  
32 shaped to allow keying of the elongate fastener are

1 provided on the upper and lower edges of the  
2 exterior surface, while lateral fastening members  
3 for securing the vertical side edges of the  
4 advertising panel are provided at the vertical side  
5 edges of the exterior surface. Backing plates may  
6 be provided on the interior surface of the curtain  
7 with the lateral fastening members. The lateral  
8 fastening members may be push-fit track members  
9 shaped to allow reversible snap engagement of the  
10 elongate fastener. Alternatively the lateral  
11 fastening members may be releasable clamping members  
12 which permit the clamping of the elongate fastener  
13 in a plurality of positions. Alternatively the  
14 lateral fastening members may be mutually engageable  
15 fastening means provided on the curtain and the  
16 advertising panel, such as hook and loop fasteners  
17 or 3M<sup>TM</sup> Dual Lock<sup>TM</sup>.

18

19 Preferably the track members are provided as  
20 discrete track members spaced at regular intervals  
21 on the vehicle.

22

23 According to a fourth aspect of the present  
24 invention there is provided a method of modifying a  
25 vehicle to display at least one advertising panel on  
26 at least one surface of the vehicle, the panel  
27 comprising a sheet of plastic mesh material having  
28 an image applied to a first side of the sheet,  
29 wherein the panel has an elongate fastener provided  
30 on at least one longitudinal edge, the elongate  
31 fastener having a thickness greater than the sheet  
32 said method comprising the steps of:

1           securing one or more slotted track members in a  
2   predetermined pattern on the surface of the vehicle  
3   or on a curtain adapted to be mounted on the surface  
4   of the vehicle, and

5           releasably attaching the advertising panel to  
6   the one or more slotted track members by engaging  
7   the elongate fastener in the slots provided on the  
8   one or more slotted track members.

9  
10          Preferably the advertising panel is a panel  
11   according to the first aspect of the present  
12   invention.

13  
14          Preferably the advertising panel is substantially  
15   rectangular having upper and lower longitudinal  
16   edges and two side edges, and elongate fasteners at  
17   the upper and lower longitudinal edges are engaged  
18   in the slots provided on the one or more slotted  
19   track members. The method may include the further  
20   step of:

21           releasably attaching the side edges of the  
22   advertising panel to one or more releasable clamping  
23   members.

24  
25          Preferably at least one side edge is provided with  
26   an elongate fastener, and the side edge is attached  
27   to the one or more releasable clamping members by  
28   clamping the elongate fastener in a selected one of  
29   a plurality of positions, to adjust the lateral  
30   tension in the advertising panel. Push-fit track  
31   members may be used instead.

32

1 According to a fifth aspect of the present invention  
2 there is provided an advertising panel for mounting  
3 to a structure, the panel comprising a sheet of  
4 plastic material having an image applied to a first  
5 side of the sheet, wherein the panel has a plurality  
6 of resilient attachment means provided along at  
7 least one edge of the panel. Preferably the panel  
8 is of mesh material.

9  
10 According to a sixth aspect of the present invention  
11 there is provided a vehicle having a rear door, the  
12 rear door having mounted thereon an advertising  
13 panel according to the fifth aspect of the present  
14 invention. Preferably the rear door is a roller  
15 shutter door. Preferably the rear door has  
16 attachment fixings secured thereto, each attachment  
17 means being attached to an attachment fixing.  
18 Preferably the resilient attachment means are  
19 adapted to allow elastic extension of the attachment  
20 means when the roller shutter door is in its rolled  
21 state with the advertising panel mounted thereon.

22  
23 Preferably the resilient attachment means comprises  
24 elastic tension members of natural or synthetic  
25 rubber. These may be in the form of bands, loops,  
26 rods or any suitable form. They may pass through an  
27 eyelet in the panel, or they may be attached to the  
28 panel by any suitable securing means, including  
29 fasteners, rivets, adhesive and stitching.

30  
31 Preferably the sheet is flexible. Preferably the  
32 sheet is of PVC, polyester or a combination thereof.

1 Preferably the mesh is provided with apertures  
2 allowing air passage therethrough. Preferably the  
3 sheet has an air permeability of at least 1000  
4 litres per second at 100 pascal.

5

6 Preferably the sheet of the advertising panel is a  
7 woven material. Preferably the warp and weft fibres  
8 are bonded to each other at their intersections.

9

10 Embodiments of the invention will now be described  
11 by way of example only, with reference to the  
12 drawings in which:

13

14 Fig. 1 shows a curtain-sided lorry provided with  
15 slotted track members to allow attachment of an  
16 advertising panel according to the invention;

17

18 Fig. 2 shows a rigid-sided lorry provided with  
19 slotted track members to allow attachment of an  
20 advertising panel according to the invention;

21

22 Fig. 3 shows the lorry of Fig. 1 with an advertising  
23 panel attached;

24

25 Fig. 4 shows the lorry of Fig. 2 with an advertising  
26 panel attached;

27

28 Fig. 5 shows a slotted track member and backing  
29 plate used to attach an advertising panel according  
30 to one embodiment of the invention;

31

1 Fig. 6 shows a sectional view of the slotted track  
2 member and backing plate of Fig. 5 attached to a  
3 curtain;

4  
5 Fig. 7 shows a releasable clamping member and  
6 backing plate used to attach an advertising panel  
7 according to another embodiment of the invention;

8  
9 Fig. 8 shows a sectional view of the releasable  
10 clamping member and backing plate of Fig. 7 attached  
11 to a curtain;

12  
13 Figs. 9a to 9h show sectional views of slotted track  
14 members and the attachment of the edge of the  
15 advertising panel according to various further  
16 embodiments of the invention;

17  
18 Figs. 10 and 11 show alternative edge arrangements  
19 for the panels of Figs. 1 to 9;

20  
21 Fig. 12 shows a cross-sectional view of a push-fit  
22 track member which can be used to secure the side  
23 edges of the panels of Figs. 1 to 9;

24  
25 Fig. 13 shows a vehicle having a roller shutter door  
26 equipped to carry an advertising panel according to  
27 the invention;

28  
29 Figs. 14a and 14b are partial sectional views of the  
30 roller shutter door of Fig. 13 with an advertising  
31 panel attached in the unrolled and rolled positions;

32

1 Fig. 15 shows an attachment means for the  
2 advertising panel of Fig. 14a; and

3  
4 Fig. 16 shows various alternative attachment means  
5 for the advertising panel of Fig. 14a.

6  
7 Fig. 1 shows a vehicle in the form of a lorry 10  
8 having a load area 12 which is covered on each  
9 longitudinal side by a curtain 14. The curtain 14  
10 is secured to the vehicle 10 at its upper edge and  
11 is tensioned in a conventional manner by means of  
12 tensioning straps 18 which connect the lower edge of  
13 the curtain to the vehicle. The curtain 14 and  
14 straps 18 are well known in the art and may be of  
15 any suitable flexible material. Typically the  
16 curtain 14 is of reinforced PVC while the straps 18  
17 are of nylon webbing.

18  
19 The surface of the curtain 18 has a number of  
20 slotted track members 30 fixed to it, seen more  
21 clearly in Figs. 5 and 6, arranged in an upper row  
22 and a lower row. Typically these coincide with  
23 alternate vertical strengthening straps 18 of the  
24 curtain 14. They may be fixed by adhesive 42 or  
25 other suitable means of securing the members to the  
26 curtain, including fixing means such as bolts,  
27 screw, rivets, staples or similar. In practice the  
28 combination of stainless steel machine screws which  
29 pass through apertures 44 in the track member 30 and  
30 engage with integral nuts 45 in a backing plate 31  
31 has been found to be an effective fastening means.  
32 Alternatively the slotted track members may be



1     secured to the curtain by thermal bonding,  
2     ultrasonic bonding, stitching, moulding or similar.  
3     The slotted track members 30 are of moulded or  
4     extruded plastic and various other non-limiting  
5     shapes are shown in Figs. 9a to 9f. The members  
6     have a cylindrical passage 34 extending therethrough  
7     and a slot 36 in one side, allowing access to the  
8     passage 34.

9  
10    The slotted track members 30 are selected and  
11    positioned to engage with elongate fasteners 22  
12    provided on the longitudinal edges 24 of an  
13    advertising panel 20, as shown in Figs. 5, 12 and  
14    13.

15  
16    Two vertical push-fit track members 40, shown in  
17    Fig. 12, are also secured to the curtain, one at  
18    each side. These are secured to the curtain in the  
19    same way as the slotted track members 30, with  
20    backing plates (not shown) if appropriate.

21  
22    Fig. 2 shows a lorry 10 having a load area 12 which  
23    is covered on each longitudinal side by a rigid wall  
24    16. The arrangement of slotted track members 30 on  
25    the rigid wall 16 can be the same as that described  
26    above with respect to the curtain 14 of Fig. 1,  
27    although in Fig. 2 two continuous slotted track  
28    members 32 are shown, one upper member and one lower  
29    member, having the same cross-section as the shorter  
30    track member illustrated in Figs. 5 and 6.

31    Continuous track members 32 typically comprise a  
32    number of 3 metre long track members 32 fixed in

1 abutting relationship. The members 32 are bonded to  
2 the wall by means of high bond double sided adhesive  
3 tape 42 or other adhesive, although it is to be  
4 understood that other suitable means of securing the  
5 members to the wall may be used, including fixing  
6 means such as bolts, screw, rivets, staples or  
7 similar. As in Fig. 1, two vertical push-fit track  
8 members 40 are also secured to the wall, one at each  
9 side. These are secured to the wall in the same way  
10 as the slotted track members 32.

11  
12 Fig. 3 shows the curtain sided lorry 10 of Fig. 1  
13 with an advertising panel 20 fixed to the curtain 14  
14 using fasteners 22 which engage with the slotted  
15 track members 30 and the push-fit track members 40.  
16 The panel 20 is described in more detail below. The  
17 edges 24 of the panel 20 are threaded through the  
18 slots 36 starting at one end of the lorry 10. While  
19 Fig. 3 shows the panel 20 on a side wall of the  
20 vehicle 10, it is to be understood that the panel  
21 may be fitted to any surface of the vehicle 10,  
22 including the rear surface or the roof. The panel  
23 20 is typically one metre shorter than the curtain  
24 14 in length, and 2 metres in height.

25  
26 Fig. 4 shows the rigid sided lorry 10 of Fig. 2 with  
27 an advertising panel 20 fixed to the wall 16 in the  
28 manner described above with reference to Fig. 3.  
29 The panel 20 is typically dimensioned to cover most  
30 of the surface area of the wall 16.

31

1 In both cases the vertical edges 26 of the panel 20  
2 are engaged with the resilient extruded PVC push-fit  
3 track members 40 as shown in Fig. 14. However the  
4 vertical edges 26 may alternatively be attached by  
5 any other suitable means. For example, a strip of  
6 hook and loop fastener may be provided at each  
7 vertical edge of the advertising panel 20 to engage  
8 with a corresponding strip of hook and loop fastener  
9 provided on the wall 16 or curtain 14. Instead of  
10 hook and loop fastener other releasable fasteners  
11 may be used, such as 3M<sup>TM</sup> Dual Lock<sup>TM</sup> or releasable  
12 clamping members 80, described below. Alternatively  
13 the plastic mesh material of the panel 20 may be  
14 extended around the corner of the vehicle 10 and  
15 securing it to the structure of the vehicle in any  
16 suitable way.

17

18 The construction of the advertising panel 20 will  
19 now be described with reference to Figs. 5, 6, 10  
20 and 11. The panel comprises a sheet 28 of plastic  
21 mesh material. Typically the mesh material  
22 comprises a polyester or polypropylene base fabric  
23 coated with PVC. The base fabric may have between 3  
24 and 10 (preferably 5) threads per cm in both warp  
25 and weft directions. Flexible plasticised PVC is  
26 applied to both sides to produce a material having a  
27 weight of between 100 and 800 g/m<sup>2</sup>, preferably  
28 between about 200 and 550 g/m<sup>2</sup>, such that the warp  
29 and weft fibres are bonded to each other at their  
30 intersections.

31

1 The apertures in the mesh allow an air permeability  
2 of between 1000 and 6000 litres/second at 100  
3 pascal, preferably about 2800 litres/second. A  
4 suitable mesh is that sold by VUFLEX Digital under  
5 the name VUFLEX Digital 550, although it is to be  
6 understood that any suitable plastic mesh may be  
7 used. The air permeability ensures that the panel  
8 remains flat against the supporting surface, whether  
9 it be a solid wall of a vehicle or a curtain. Air  
10 pressure either side of the panel is equalised,  
11 thereby preventing flapping of the panel against the  
12 supporting surface.

13

14 The mesh must be capable of being printed on, to  
15 provide an advertising image on one side. Any  
16 suitable printing process may be used, such as laser  
17 printing or screen printing. The apertures must be  
18 small enough such that the effect of the advertising  
19 panel when mounted on a solid surface and viewed  
20 from a distance is of an opaque panel. In a  
21 particular embodiment the plasticised warp and weft  
22 fibres have a width of about 1 mm, while the  
23 apertures are about 1 mm square. An opaque effect  
24 is produced if the apertures make up about 25% or  
25 less of the area of the panel. If the apertures  
26 make up more than about 35% of the area of the panel  
27 the opacity effect is diminished.

28

29 Reinforcing strips (not shown) of reinforced PVC or  
30 similar material may be bonded to any or all of the  
31 edges of the mesh sheet 28 to prevent the  
32 advertising panel 20 from tearing or stretching in

1 use. The reinforcing strips may be bonded by  
2 adhesive or by ultrasonic welding. The strips may  
3 be of polypropylene or polyester scrim coated with  
4 PVC for easy joining to the mesh sheet 28. The  
5 thickness of the strips is chosen so that the sheet  
6 28 can be subject to the chosen printing process  
7 even with the strips attached. Typically the  
8 reinforcing strips are between 5 and 15 cm wide, and  
9 extend to the perimeter of the sheet 28.

10

11 Elongate fasteners 22 are bonded to the longitudinal  
12 edges 24 of the mesh sheet 28, with or without  
13 reinforcing strips, by wrapping the edge of the  
14 sheet around the fastener 22 and stitching with  
15 thread 56 or bonding to form a hem 50, as in Fig.  
16 12, or by attaching and bonding an edge strip 52, as  
17 in Fig. 13, of any suitable plastic material.  
18 Thermal or adhesive 58 bonding may be used. The  
19 elongate fastener 22 comprises a cord or rope 54, or  
20 extruded flexible plastic or rubber, held in the hem  
21 50 or edge strip 52. The cord or rope 54 may be  
22 free to slide in the hem 50 or edge strip 54, or may  
23 be restrained or bonded to the hem 50 or edge strip  
24 52. Similar elongate fasteners 22 are provided on  
25 the vertical edges 26 of the panel if push-fit track  
26 members 40 or releasable clamping members 80 are  
27 used to secure the vertical edges. The edge strip  
28 52 may be of the same material as the reinforcing  
29 strips described above.

30

31 The panel is installed on a vehicle 10 by threading  
32 the elongate fasteners 22 at the top and bottom

1 edges of the panel 22 into the slotted track members  
2 30,32 simultaneously and pulling the panel  
3 horizontally until it extends from one vertical side  
4 to the other of the supporting surface. The  
5 vertical edges of the panel are then secured using  
6 any suitable securing means.

7  
8 It has been found that it is advantageous to provide  
9 a continuous fastener, preferably a fastener 22  
10 which can engage with the push-fit track member 40  
11 or a fastener such as a hook and loop fastener (not  
12 shown), extending all the way along the leading edge  
13 of the advertising panel 20. The leading edge is  
14 that edge which is nearer the front of the vehicle  
15 in use. The use of a continuous fastener engaging  
16 with a corresponding continuous fastener on the  
17 vehicle 10 prevents the leading edge of the panel 20  
18 lifting away from the vehicle at any point, and  
19 helps to hold the panel 20 to the wall 16 or curtain  
20 14 without flapping. The same effect can be  
21 achieved by continuing the panel around the corner  
22 of the vehicle and securing it in place by any  
23 suitable means to the end wall of the vehicle.

24  
25 Particular arrangements of fasteners are provided  
26 for particular models of vehicles 10 and their  
27 corresponding advertising panels 20. For example a  
28 Transit® van might carry a particular size of  
29 advertising panel 20; panels for these vans would  
30 carry a particular pattern of fasteners.  
31 Corresponding fasteners on Transit® vans would be  
32 fixed to the side wall 16 of the van in a

1 corresponding pattern using a particular Transit®  
2 stencil. Similarly, a particular make of trailer  
3 might carry a particular larger size of advertising  
4 panel 20; panels for these trailers would carry a  
5 different particular pattern of fasteners.  
6 Corresponding fasteners on the trailers would be  
7 fixed to the curtain 14 or side wall 16 of the  
8 trailer in a corresponding pattern using a  
9 particular trailer stencil.

10

11 Referring to Figs. 5 and 6, there is shown a  
12 discrete slotted track member 30. It is to be  
13 understood that the continuous track member 32 has  
14 the same cross-section. The backing plate 31 used  
15 to connect the track member 30 to a curtain 14 by  
16 sandwiching the curtain 14 between the track member  
17 30 and backing plate 31 has threaded sockets 45  
18 which correspond in position to the apertures 44 in  
19 the track member 30. Screws or bolts (not shown)  
20 are used to secure the track member 30 and backing  
21 plate 31 together. Conventional bolts and nuts may  
22 be used instead of threaded sockets. Corresponding  
23 holes in the curtain 14 can be pre-formed or can be  
24 formed by insertion of the screws into the apertures  
25 44.

26

27 Referring to Figs. 9a to 9h, there are shown  
28 alternative cross-sectional profiles 38a-h of the  
29 discrete or continuous slotted track members 30, 32.  
30 Profiles 38a-d and 38h have the slot 36 in a side  
31 face, while profiles 38e-g have the slot 36 in a  
32 lower face so that the advertising panel 20 hangs

1 straight, eliminating wear. Profiles 38a and 38b  
2 are attached by bonding using adhesive 42 or  
3 similar, while profiles 38c-h are attached using  
4 fasteners (not shown) which pass through apertures  
5 44. A washer plate (not shown) may be used with  
6 nuts and threaded fasteners to secure the profiles  
7 38c-h to a curtain 14, or conventional fasteners may  
8 be passed through the apertures 44 to secure the  
9 profiles 38c-h to a rigid wall 16.

10

11 In the embodiment of Fig. 9h screw holes 44 for  
12 securing profile 38h are provided in the passage 34,  
13 so that they remain hidden in use. Light fittings  
14 46 are provided at spaced intervals along the track  
15 member for illumination of the advertising panel 20.

16

17 Referring to Figs. 7 and 8, there is shown a  
18 releasable clamping member 80 which can be used  
19 instead of the push fit track member 40 to secure  
20 the lateral edges of the advertising panel 20, which  
21 are provided with an elongate fastener 22 as  
22 described above with reference to Figs. 3, 4, 10 and  
23 11. The clamping member 80 comprises an upper plate  
24 82 and a lower plate 84 joined by a hinge 86. The  
25 upper and lower plates 82, 84 have corresponding  
26 detent portions 88, 90 which engage with each other  
27 in a snap fit to close the clamping member.

28

29 The upper and lower plates 82, 84 each have a ribbed  
30 surface 92 which can accommodate the elongate  
31 fastener 22 in a plurality of positions, such that  
32 the advertising panel 20 can be tensioned laterally



1 and held in the position required to maintain  
2 tension. In this way the system can accommodate  
3 tolerances in the overall width of the advertising  
4 panel 20 or in the position of the clamping members  
5 80 while still ensuring that the advertising panel  
6 20 remains flat against the surface to which on it  
7 is mounted. The upper plate 82 has a handle portion  
8 94 and a closure flange 96 which holds the mesh 28  
9 of the panel 20 against the curtain 14 or wall 16.  
10 The clamping member can be secured to a curtain 14  
11 using a backing plate 98 in the same way as  
12 described above with reference to the track member  
13 30 and backing plate 31. The upper and lower plates  
14 82, 84, like the track members 30, are of plastic  
15 such as polypropylene, and can be formed by  
16 extrusion.

17 In the embodiments described above, the advertising  
18 panel 20 of the invention has been described with  
19 reference to its mounting on a vehicle. However, it  
20 is to be understood that the advertising panel can  
21 be mounted on a fixed structure, such as a building  
22 or an advertising hoarding. In such cases slotted  
23 track members of the type herein described may be  
24 used to secure the advertising panel to the fixed  
25 structure. However, it is to be understood that  
26 suitable slots may be provided in other elements  
27 attached to the structure, and the invention is not  
28 to be limited to advertising panels mounted using  
29 slotted track members or releasable clamping members  
30 as described herein. In fixed or static structures  
31 or where the effects of air movement relative to the

1 advertising panel are not significant, the plastic  
2 mesh may be replaced by a solid plastic sheet.

3

4 A method of attaching an advertising panel 20 to the  
5 rear of a vehicle which may be provided with a  
6 roller shutter door is now described with reference  
7 to Figs. 13 to 16. A vehicle 10 has a rear wall 60  
8 having a roller shutter door 62. Attached to the  
9 shutters of the door 62 at four corners are  
10 attachment fixings 66, comprising a plate 70, a loop  
11 72 and apertures 74 for fasteners (not shown) such  
12 as screws, bolts, rivets or the like. An  
13 advertising panel 20 of the type described above  
14 with reference to Figs. 1 to 9 is attached to the  
15 attachment fixings 66 by means of four resilient  
16 attachment means 64, of natural or synthetic rubber.  
17 Fig. 16 shows four possible shapes for the  
18 attachment means 64a-d, but is not to be construed  
19 as limiting on the shape. Moreover it is to be  
20 understood that more than four attachment means 64  
21 may be used, or alternatively more or fewer  
22 resilient attachment means 64 may be used in  
23 conjunction with some other means of fastening, such  
24 as hook and loop fasteners (not shown) or the slot-  
25 engaging elongate fasteners 22 described above.

26

27 In the embodiment of Figs. 13 to 16 the advertising  
28 panel can be used with resilient attachment means 64  
29 only, so that the elongate fasteners 22 can be  
30 omitted. The resilient attachment means 64 allow  
31 stretching, so that when the roller shutter door 62  
32 is opened by rolling the shutters 61 around a spool

1     63, as shown in Fig. 14b, the attachment means 64  
2     become elongated to allow for the increased  
3     effective length between the top and bottom  
4     attachment fixings 66 resulting from the separation  
5     of adjacent shutters 61.

6  
7     Modifications and variations of the above-described  
8     embodiments can be adopted without departing from  
9     the scope of the invention.  
10

1     Claims

2

3     1.    An advertising panel for mounting to a  
4     structure, the panel comprising a sheet of plastic  
5     material having an image applied to a first side of  
6     the sheet, wherein the panel has an elongate  
7     fastener provided on at least one longitudinal edge,  
8     the elongate fastener having a thickness greater  
9     than the sheet and being adapted to engage with a  
10    corresponding slot provided on the structure.

11

12    2.    An advertising panel according to Claim 1,  
13    wherein the advertising panel is mounted to the  
14    structure of a vehicle.

15

16    3.    An advertising panel according to Claim 1,  
17    wherein the advertising panel is mounted to a static  
18    structure.

19

20    4.    An advertising panel according to any preceding  
21    Claim, wherein the sheet has a hem and the elongate  
22    fastener comprises a longitudinal member held within  
23    the hem of the sheet.

24

25    5.    An advertising panel according to Claim 4,  
26    wherein the hem is formed by folding an edge of the  
27    sheet around the elongate fastener and back against  
28    the sheet, then securing the edge to the sheet.

29

30    6.    An advertising panel according to any of Claims  
31    1 to 3, wherein the elongate fastener comprises a

1 longitudinal member secured to the sheet by an  
2 edging strip.

3

4 7. An advertising panel according to Claim 6,  
5 wherein the edging strip passes around the elongate  
6 fastener and is secured to each side of the edge of  
7 the sheet.

8

9 8. An advertising panel according to any preceding  
10 Claim, wherein the longitudinal member is flexible.

11

12 9. An advertising panel according to any preceding  
13 Claim, wherein the panel has an elongate fastener  
14 provided on two opposite longitudinal edges.

15

16 10. An advertising panel according to any preceding  
17 Claim, wherein the sheet is flexible.

18

19 11. An advertising panel according to any preceding  
20 Claim, wherein the sheet is a mesh of PVC,  
21 polyester, polypropylene or a combination thereof.

22

23 12. An advertising panel according to any preceding  
24 Claim, wherein the mesh is provided with apertures  
25 allowing air passage therethrough, such that the  
26 sheet has an air permeability of at least 1000  
27 litres per second at 100 pascal.

28

29 13. An advertising panel according to any preceding  
30 Claim, wherein the sheet of the advertising panel is  
31 a woven material.

32

1 14. An advertising panel according to Claim 13,  
2 wherein the woven material has warp and weft fibres  
3 bonded to each other at their intersections.  
4

5 15. An advertising panel according to any preceding  
6 Claim, wherein the panel is substantially  
7 rectangular.  
8

9 16. An advertising panel according to any preceding  
10 Claim, wherein the panel is provided with an  
11 extension piece at one or both of the two opposite  
12 side edges, said one or both extension pieces being  
13 provided with securing means to allow them to be  
14 wrapped around the corner of a vehicle and secured  
15 to the vehicle.  
16

17 17. An advertising panel according to any of Claims  
18 1 to 15, wherein one or both of the two opposite  
19 side edges are provided with reclosable interlocking  
20 fasteners adapted to engage with corresponding  
21 interlocking fasteners on the structure.  
22

23 18. An advertising panel according to Claim 17,  
24 wherein the fasteners are 3M<sup>TM</sup> Dual Lock<sup>TM</sup> fasteners.  
25

26 19. An advertising panel according to any of Claims  
27 1 to 15, wherein one or both of the two opposite  
28 side edges are provided with an elongate fastener  
29 having a thickness greater than the sheet on each of  
30 the two opposite side edges, the fastener being  
31 adapted to engage with one or more lateral fastening  
32 members on the structure.

1     20. An advertising panel according to Claim 19,  
2     wherein the one or more lateral fastening members  
3     are releasable clamping members adapted to clamp the  
4     elongate fastener in a selected one of a plurality  
5     of positions.

6  
7     21. A vehicle having a wall provided with a slot or  
8     slots on the exterior surface thereof, the vehicle  
9     having an advertising panel mounted on said exterior  
10    surface, the panel comprising a sheet of plastic  
11    mesh material having an image applied to a first  
12    side of the sheet, wherein the panel has an elongate  
13    fastener provided on at least one longitudinal edge,  
14    the elongate fastener having a thickness greater  
15    than the sheet and engaged with said slot or slots  
16    on said vehicle.

17  
18    22. A vehicle according to Claim 21, wherein the  
19    advertising panel is an advertising panel according  
20    to any of Claims 1 to 20.

21  
22    23. A vehicle according to Claim 21 or 22, wherein  
23    the exterior surface is on a side wall of the  
24    vehicle.

25  
26    24. A vehicle according to any of Claims 21 to 23,  
27    wherein the slot or slots are provided in one or  
28    more track members bonded to the exterior surface by  
29    adhesive.

30  
31    25. A vehicle according to any of Claims 21 to 23,  
32    wherein the slot or slots are provided in one or

1 more track members secured to the side wall by  
2 fixing means.

3  
4 26. A vehicle according to any of Claims 24 to 25,  
5 wherein the track members are extruded members, and  
6 the slot or slots are shaped to allow keying of the  
7 elongate fastener with the slot or slots.

8  
9 27. A vehicle according to Claim 26, wherein one or  
10 more of said track members are provided on each of  
11 the upper and lower edges of the exterior surface.

12  
13 28. A vehicle having a load bearing volume at least  
14 partially enclosed by a curtain, said curtain being  
15 provided with a slot or slots on the exterior  
16 surface thereof, the vehicle having an advertising  
17 panel on said exterior surface, the panel comprising  
18 a sheet of plastic mesh material having an image  
19 applied to a first side of the sheet, wherein the  
20 panel has an elongate fastener provided on at least  
21 one longitudinal edge, the elongate fastener having  
22 a thickness greater than the sheet and engaged with  
23 said slot or slots on said vehicle.

24  
25 29. A vehicle according to Claim 28, wherein the  
26 advertising panel is an advertising panel according  
27 to any of Claims 1 to 20.

28  
29 30. A vehicle according to Claim 28 or 29, wherein  
30 the slot or slots are provided in one or more track  
31 members bonded to the exterior surface by adhesive.

32



1     31. A vehicle according to Claim 28 or 29, wherein  
2     the slot or slots are provided in one or more track  
3     members secured to the side wall by fixing means.

4  
5     32. A vehicle according to Claim 31, wherein  
6     each of said track members has a corresponding  
7     backing plate on the opposite side of the curtain,  
8     the fixing means passing through the curtain and  
9     joining the corresponding track member and backing  
10    plate.

11  
12    33. A vehicle according to any of Claims 28 to 32,  
13    wherein the track members are extruded members, and  
14    the slot or slots are shaped to allow keying of the  
15    elongate fastener with the slot or slots.

16  
17    34. A vehicle according to Claim 33, wherein one or  
18    more of said track members are provided on each of  
19    the upper and lower edges of the exterior surface.

20  
21    35. A vehicle according to any of Claims 28 to 34,  
22    wherein the track members are provided as discrete  
23    lengths of track spaced at regular intervals on the  
24    vehicle.

25  
26    36. A method of modifying a vehicle to display at  
27    least one advertising panel on at least one surface  
28    of the vehicle, the panel comprising a sheet of  
29    plastic mesh material having an image applied to a  
30    first side of the sheet, wherein the panel has an  
31    elongate fastener provided on at least one  
32    longitudinal edge, the elongate fastener having a

1 thickness greater than the sheet said method  
2 comprising the steps of:  
3       securing one or more slotted track members in a  
4 predetermined pattern on the surface of the vehicle  
5 or on a curtain adapted to be mounted on the surface  
6 of the vehicle, and  
7       releasably attaching the advertising panel to  
8 the one or more slotted track members by engaging  
9 the elongate fastener in the slots provided on the  
10 one or more slotted track members.

11  
12 37. A method according to Claim 36, wherein the  
13 advertising panel is an advertising panel according  
14 to any of Claims 1 to 20.

15  
16 38. A method according to Claim 36 or 37, wherein  
17 the advertising panel is substantially rectangular  
18 having upper and lower longitudinal edges and two  
19 side edges, and wherein elongate fasteners at the  
20 upper and lower longitudinal edges are engaged in  
21 the slots provided on the one or more slotted track  
22 members, including the further step of:  
23       releasably attaching the side edges of the  
24 advertising panel to one or more releasable clamping  
25 members.

26  
27 39. A method according to Claim 38, wherein:  
28       at least one side edge is provided with an  
29 elongate fastener,  
30       the side edge is attached to the one or more  
31 releasable clamping members by clamping the elongate  
32 fastener in a selected one of a plurality of

1 positions, to adjust the lateral tension in the  
2 advertising panel.

3

4 40. An advertising panel for mounting to a  
5 structure, the panel comprising a sheet of plastic  
6 mesh material having an image applied to a first  
7 side of the sheet, wherein the panel has a plurality  
8 of resilient attachment means provided along at  
9 least one edge of the panel.

10

11 41. A vehicle having a rear door, the rear door  
12 having mounted thereon an advertising panel  
13 according to Claim 40.

14

15 42. A vehicle according to Claim 41, wherein the  
16 rear door is a roller shutter door.

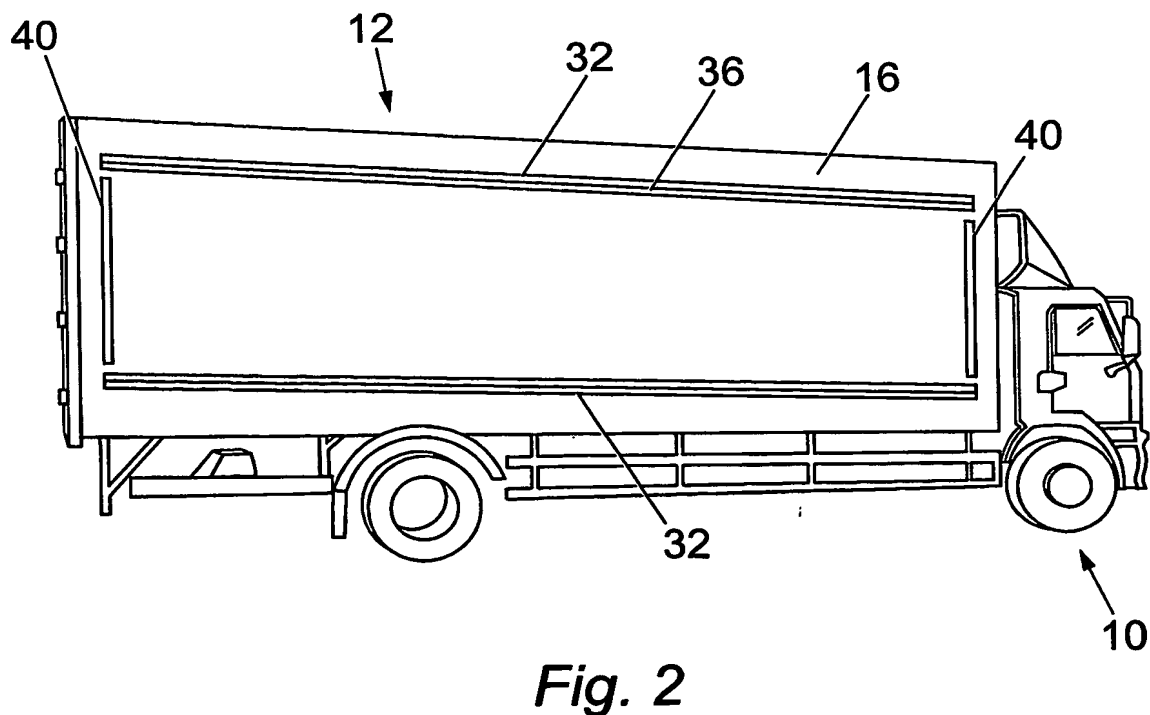
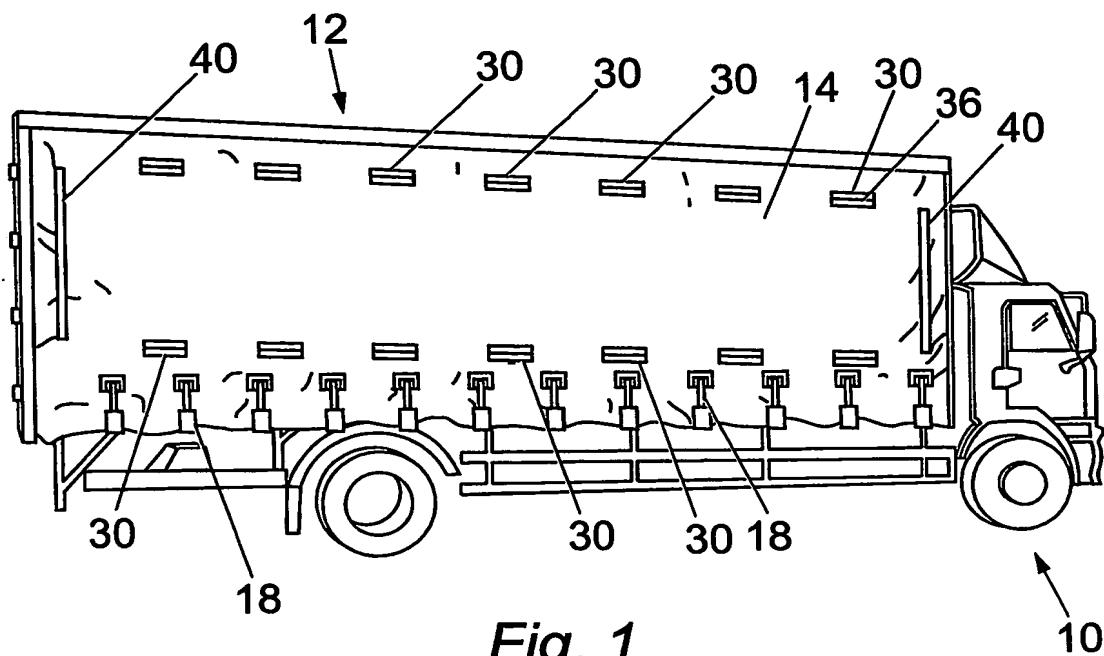
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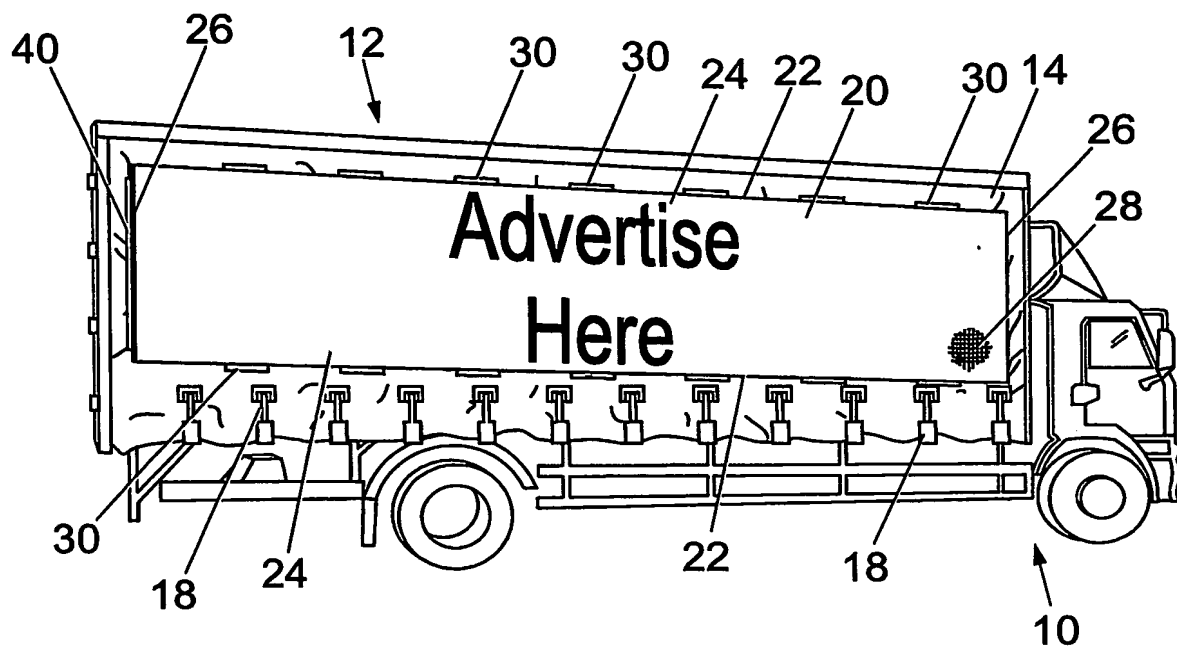
18 43. A vehicle according to Claim 42, wherein the  
19 rear door has attachment fixings secured thereto,  
20 each attachment means being attached to an  
21 attachment fixing and being adapted to allow elastic  
22 extension of the attachment means when the roller  
23 shutter door is in its rolled state with the  
24 advertising panel mounted thereon.

25

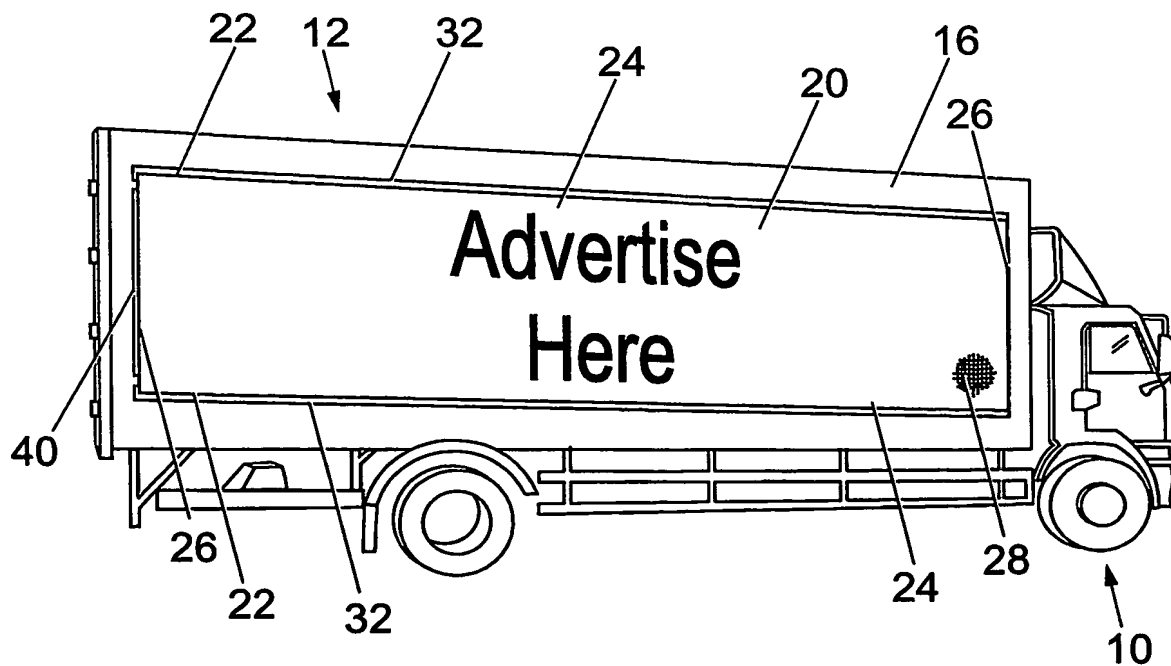
26 44. A vehicle according to any of Claims 41 to 43,  
27 wherein the resilient attachment means comprises  
28 elastic tension members of natural or synthetic  
29 rubber.

1 / 6



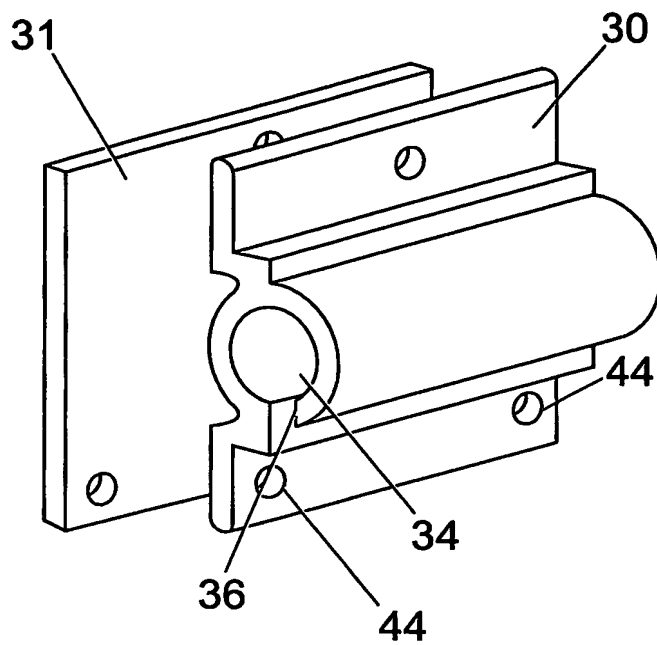


**Fig. 3**

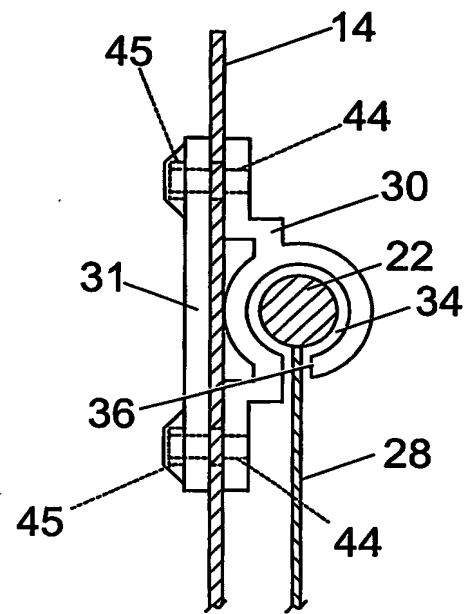


**Fig. 4**

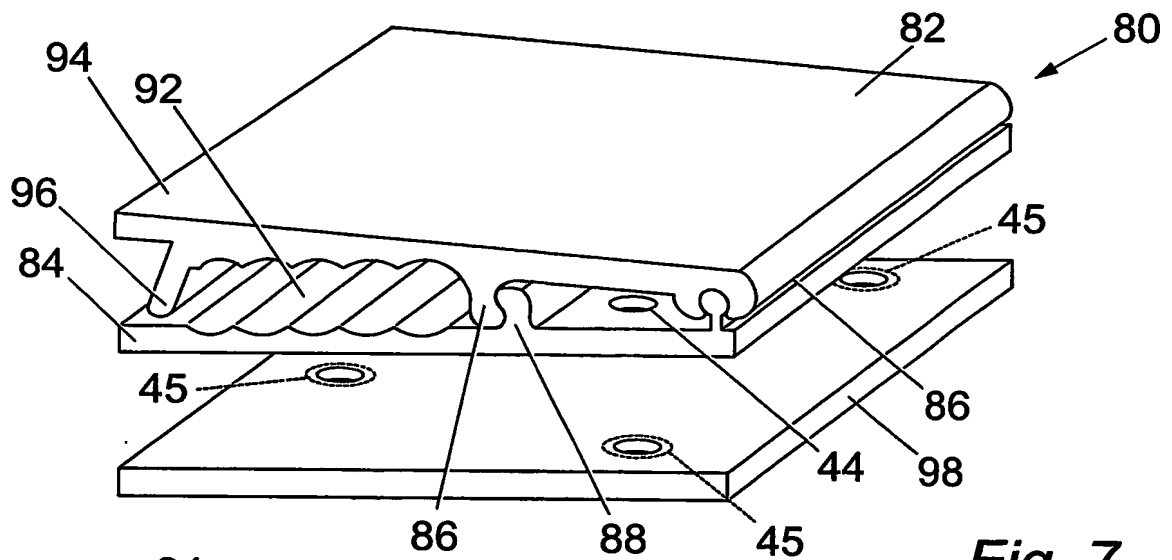
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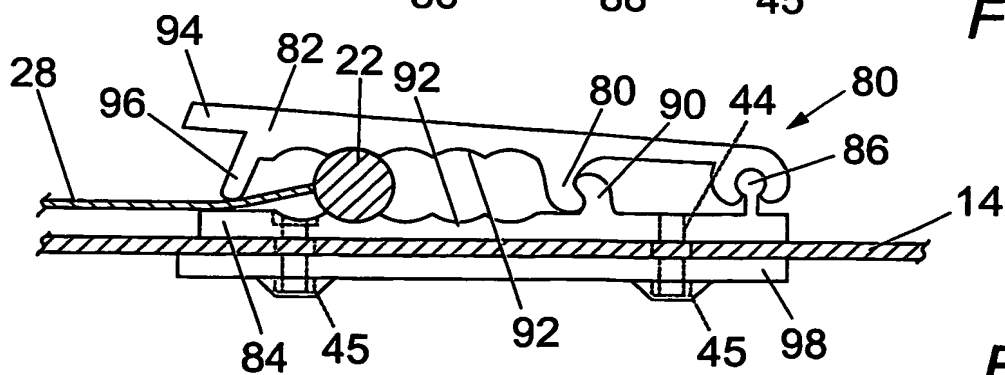
*Fig. 5*



*Fig. 6*

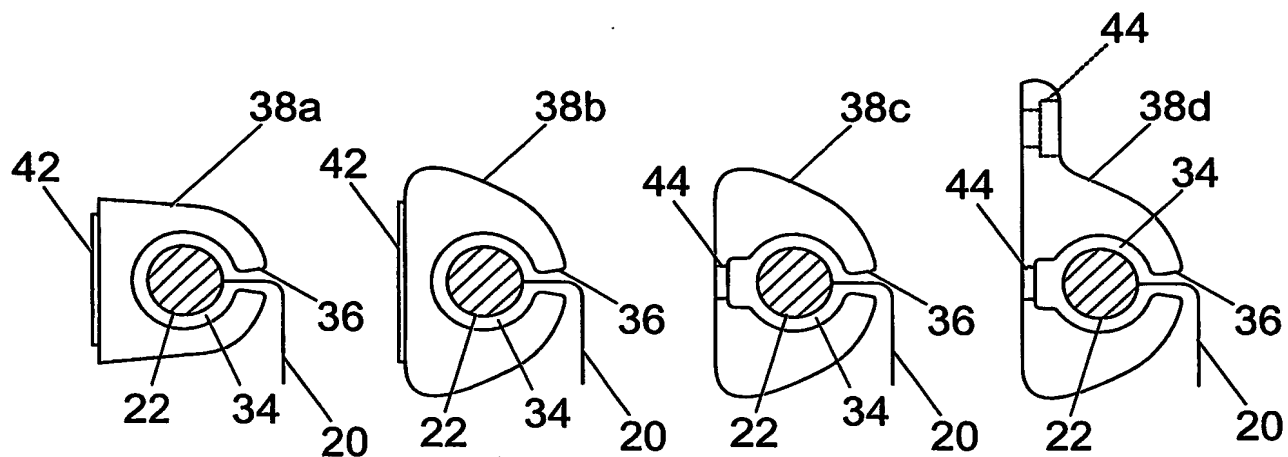
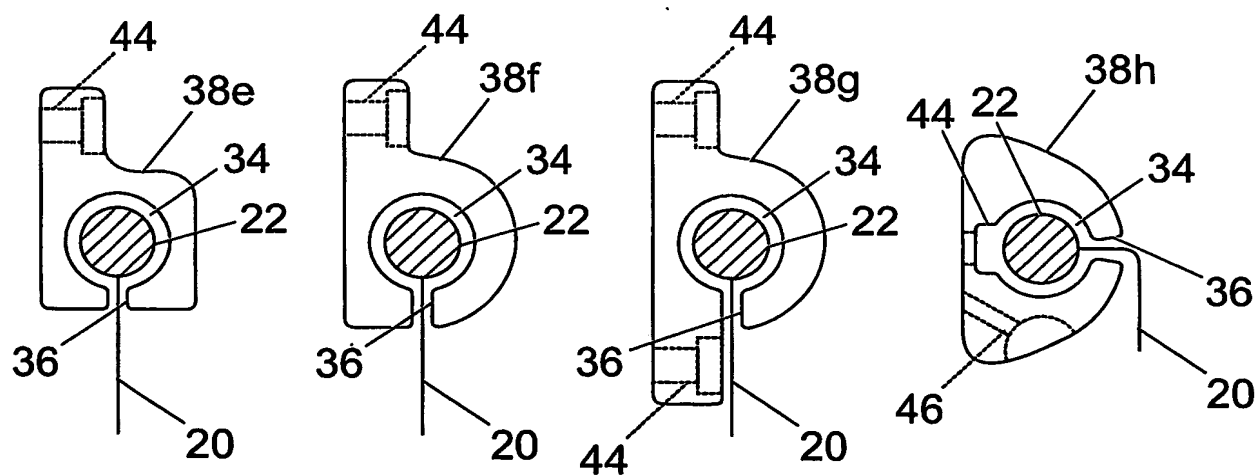


*Fig. 7*

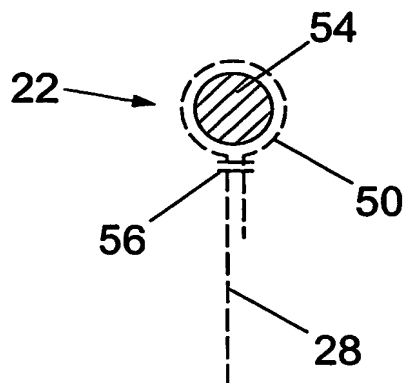


*Fig. 8*

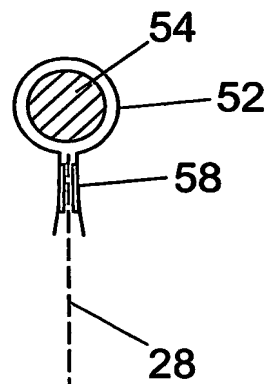
4 / 6

*Fig. 9a**Fig. 9b**Fig. 9c**Fig. 9d**Fig. 9e**Fig. 9f**Fig. 9g**Fig. 9h*

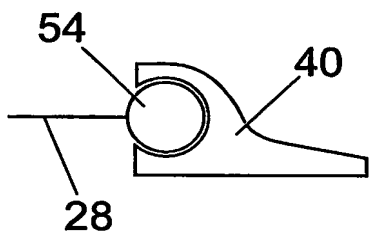
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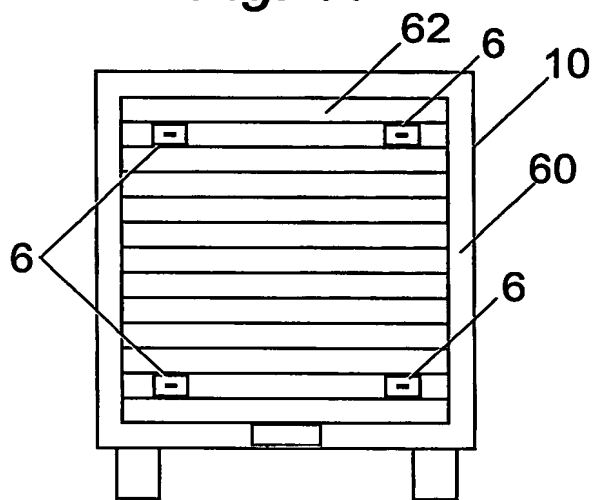
*Fig. 10*



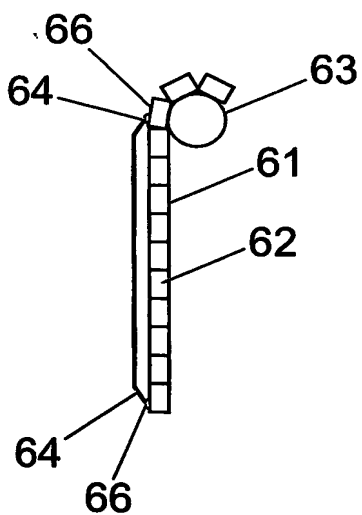
*Fig. 11*



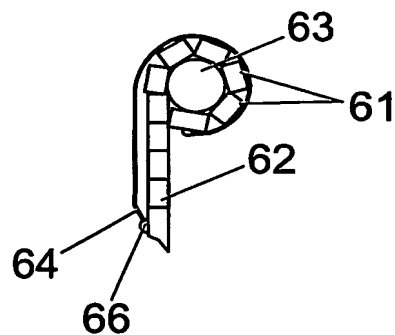
*Fig. 12*



*Fig. 13*



*Fig. 14a*



*Fig. 14b*



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